

**ISSUES AND OPTIONS FOR MODIFICATIONS TO THE  
ATLANTIC LARGE WHALE TAKE REDUCTION PLAN**

**SCOPING DOCUMENT**

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## TABLE OF CONTENTS

1.	Purpose of the scoping document.....	1.
2.	Atlantic large whale take reduction plan, including issues and needs for an amendment to the plan.....	3.
3.	Atlantic large whale take reduction plan options.....	6.
	I. ALWTRP Guiding Principles.....	6.
	II. Trap/Pot Fisheries.....	6.
	A. Lobster.....	6.
	I. Northern Inshore and Nearshore Lobster Waters.....	6.
	ii. Offshore Lobster Waters.....	9.
	iii. Southern Nearshore Lobster Waters.....	11.
	B. Black sea bass, scup, conch/whelk, and shrimp.....	12.
	C. Red crab.....	13.
	D. Hagfish.....	13.
	E. Jonah Crab.....	14.
	III. Gillnet Fisheries.....	15.
	A. Northeast.....	15.
	I. Anchored gillnet.....	15.
	B. Mid-Atlantic.....	17.
	I. Anchored gillnet.....	17.
	ii. Drift gillnet.....	18.
	C. Southeast.....	19.
	I. Shark gillnet.....	19.
	ii. Coastal gillnet.....	20.
	IV. ALWTRP Critical Habitat Areas.....	21.
	V. Exempted Areas.....	22.
	VI. Gear Marking.....	23.
	VII. Atlantic Large Whale Take Reduction Plan Language Changes.....	25.
4.	List of References.....	27.
	Appendix I: Marine Mammal Protection Act Definitions used by the Atlantic Large Whale Take Reduction Plan Regulations.....	28.
	Appendix II: Proposed Exempted Areas.....	29.
	Appendix III: Criteria for Establishing a Density Standard for Neutrally Buoyant Rope And Procedure for Determining the Specific Gravity of Rope.....	33.
	Appendix IV: Schedule of Scoping Meetings.....	35.

## 1. PURPOSE OF THE SCOPING DOCUMENT

The National Marine Fisheries Service (NOAA Fisheries) intends to amend the Atlantic Large Whale Take Reduction Plan (ALWTRP) to revise the management measures for reducing the incidental mortality and serious injury to the North Atlantic right whale (*Eubalaena glacialis*), humpback whale (*Megaptera novaeangliae*), and fin whale (*Balaenoptera physalus*) in commercial fisheries and to meet the goals of the Marine Mammal Protection Act (MMPA). The scoping process, for which this document was prepared, is the first stage in a multi-step process required by the National Environmental Policy Act (NEPA) to ensure that Federal agencies evaluate the environmental impacts of major Federal actions. During the scoping process, the public is provided with an opportunity to assist NOAA Fisheries in determining the scope of issues that require analysis. The analysis of issues and the environmental impacts of the proposed action is then presented in a Draft Environmental Impact Statement (EIS), which is made available for public comment.

In April 2003, NOAA Fisheries reconvened the Atlantic Large Whale Take Reduction Team (ALWTRT), a multi-stakeholder group that assists NOAA Fisheries in developing and modifying the ALWTRP. At the April 2003 meeting, the ALWTRT was asked by NOAA Fisheries to consider and develop options for addressing interactions between commercial fishing gear and large whales. The options developed by the ALWTRT are intended to further reduce the potential for entanglements, minimize adverse impacts if entanglements occur, and mitigate the effects of any unavoidable entanglements.

The purpose of this document is to provide the public with materials from which they can consider and comment on issues and options relative to the management of commercial fishery and large whale interactions. This document describes the major issues, current management and legal requirements, and identifies potential management measures (including measures already in effect) to address fisheries that may frequently or occasionally interact with large whales. Comments received on this action will assist NOAA Fisheries in determining the options for rulemaking to manage commercial fishery interactions with large whales. NOAA Fisheries will hold public scoping meetings in July 2003 (Appendix IV) and will accept comments through July 30, 2003 (68 FR 38676, June 30, 2003).

NOAA Fisheries believes that public involvement is critical during the development and drafting of any regulatory action, especially the amendment to the ALWTRP. Public input, for example, can be used to explore the full range of alternative approaches to future management. Accordingly, the views of the commercial fisheries, recreational fisheries, conservation and scientific communities, the regional fishery management councils, the states, and the general public are being sought by NOAA Fisheries through circulation of this issues and options document. NOAA Fisheries anticipates that additional issues and options will be identified by the public during the series of scoping meetings. These additional issues and options will also be considered when drafting the amendment to the ALWTRP. The ensuing management decisions will affect trap/pot and gillnet fishermen, related industries and communities, and large whales.

It is important to note that the options presented in this document are not true management alternatives and may not be analyzed in the NEPA EIS process. Also, the options presented in this document are not necessarily endorsed by NOAA Fisheries at this time. Rather, these represent a number of management measures, not necessarily mutually exclusive of each other, that the ALWTRT developed at the April meeting and subsequent subgroup meetings. This document represents NOAA Fisheries' best efforts to capture the ideas and range of viewpoints expressed by the ALWTRT. NOAA Fisheries will consider these options, as well as other options provided by the public, through the scoping process when developing management alternatives for the ALWTRP EIS process to meet the goals of the MMPA and the Endangered Species Act (ESA).

## **2. ATLANTIC LARGE WHALE TAKE REDUCTION PLAN, INCLUDING ISSUES AND NEEDS FOR AN AMENDMENT TO THE PLAN**

### Introduction

Pursuant to Section 118 of the MMPA, NOAA Fisheries established the Atlantic Large Whale Take Reduction Team (ALWTRT or Team) to develop a plan for reducing the incidental by-catch of three endangered species of large whale - the North Atlantic right whale (*Eubalaena glacialis*), humpback whale (*Megaptera novaeangliae*), fin whale (*Balaenoptera physalus*) - in four commercial fisheries along the Atlantic coast. These fisheries include the New England Multispecies sink gillnet fishery, the Gulf of Maine/U.S. Mid-Atlantic lobster trap/pot fishery, the U.S. Mid-Atlantic coastal gillnet fishery, and the Southeastern U.S. Atlantic shark gillnet fishery. New fisheries (Northeast trap/pot, Mid-Atlantic mixed species trap/pot, and Mid-Atlantic and Southeast Atlantic black sea bass trap/pot fisheries) were added to the ALWTRT process in 2003, including those that target hagfish, Jonah crab, red crab, shrimp, black sea bass, and conch/whelk.

The Team consists of representatives from the fishing industry, fishery management councils, state and federal resource management agencies, the scientific community, and conservation organizations. The immediate goal of the Team was to draft an Atlantic Large Whale Take Reduction Plan (Plan) to reduce the incidental take of these three large whale species that interact with commercial fisheries to a level less than the potential biological removal level (PBR) within six months of implementation of the Team's plan. The measures proposed under the Plan would also benefit minke whales (*Balaenoptera acutorostrata*), which are neither listed under the Endangered Species Act (ESA) nor designated as a strategic stock under the MMPA.

Following the ALWTRT's initial set of meetings, NOAA Fisheries developed a proposed Plan published on July 22, 1997 (62 FR 16519), which was later modified and finalized on February 16, 1999 (64 FR 7529). Additional gear modifications were published as an interim final rule in December 2000 (65 FR 80368) and a final rule in January 2002 (67 FR 1300, January 10, 2002; 67 FR 15493, April 2, 2002). NMFS also published an interim final rule for a Seasonal Area Management (SAM) program (67 FR 1142, January 9, 2002; 67 FR 65722, October 28, 2002) and a final rule for a Dynamic Area Management (DAM) program in January 2002 (67 FR 1133, January 9, 2002; 67 FR 65722, October 28, 2002). The main tools of the plan include a combination of broad gear modifications and time-area closures (which are being supplemented by progressive gear research), expanded disentanglement efforts, extensive outreach efforts in key areas, and an expanded right whale surveillance program to supplement the Mandatory Ship Reporting System. The complete text of the regulations implementing the ALWTRP can be found in the Code of Federal Regulations (CFR) at 50 CFR 229.32 or on the ALWTRP website at: <http://www.nero.nmfs.gov/whaletrp>. A guide to the regulations implementing the ALWTRP can also be found on the website.

## Issues and Needs

NOAA Fisheries reconvened the ALWTRT April 28-30, 2003, to help evaluate the ALWTRP, and discuss additional modifications that may be necessary to meet the goals of the MMPA and ESA. Under the 1994 Amendments to the MMPA, the goal of a Take Reduction Plan is to reduce the incidental take of strategic stocks of marine mammals in commercial fishing operations to below PBR within 6 months of Plan implementation and to insignificant levels approaching a zero mortality and serious injury rate (zero mortality rate goal (ZMRG)) within 5 years of Plan implementation. For right whales these two goals are essentially the same as PBR has been defined as zero. Under the ESA, NOAA Fisheries is obligated to use its authorities to conserve endangered and threatened species and ensure that actions authorized by the agency, such as fishing in federal waters, are not likely to jeopardize the continued existence of any endangered or threatened species, including right whales.

The number of entanglement events over that past year has highlighted the need to develop additional modifications to the ALWTRP. For example, eight right whale entanglements were documented in 2002, including seven live whales and one dead whale (Whittingham *et al.* 2003). Additionally, nineteen humpback whale entanglements were documented in 2002, including fifteen live whales and four dead whales (Whittingham *et al.* 2003). Due to the number of documented entanglements in 2002, NOAA Fisheries was statutorily obligated to reassess the effectiveness of the existing ALWTRP. Therefore, in light of and in response to the entanglement events in 2002, the ALWTRT was asked by NOAA Fisheries to consider and develop options for addressing commercial fishery interactions with large whales. Particular emphasis was placed on those options designed to reduce the potential for entanglements, minimize adverse impacts if entanglements occur, and mitigate the effects of any unavoidable entanglements. Furthermore, modifications to the existing ALWTRP were warranted to meet the purposes and objectives of the MMPA and ESA, as discussed above.

At the April 2003 meeting, it was agreed that the ALWTRT would meet in separate subgroups over the two following months to further refine the proposals developed at the meeting. These ALWTRT meetings included a “Northeast Inshore Lobster Trap/Pot” subgroup that met on May 19, 2003, in Portsmouth, New Hampshire; an “Offshore Trap/Pot” subgroup that met on June 17, 2003, in Gloucester, Massachusetts; a “Southeast/Mid-Atlantic” subgroup that met on June 23, 2003, in Philadelphia, Pennsylvania; and a “Northeast Gillnet” subgroup met on June 24, 2003, via conference call. All ALWTRT meetings, including subgroup meetings, were open to the public. Recommendations and/or proposals from the full ALWTRT and subsequent subgroup meetings were used to develop this management options document for distribution at the scoping meetings. The options presented in this document represent NOAA Fisheries’ best effort to summarize the recommendations discussed and developed at the recent ALWTRT and subsequent subgroup meetings and, therefore, may not necessarily capture the exact meaning intended by the person providing the comment or reflect the consensus of the full Team.

## Environmental Impact Statement (EIS)

An Environmental Impact Statement (EIS) was originally intended to analyze impacts to the environment of the different management alternatives that would finalize the SAM program. However, due to the continued entanglements of large whale in fishing gear since the publication of the SAM interim final rule, NOAA Fisheries, pursuant to its statutorily mandated responsibilities, has determined that additional modifications to the ALWTRP are needed. Therefore, a Notice of Intent (NOI) was published in the *Federal Register* to announce NOAA Fisheries' intent to change the scope of the EIS in order to consider more alternatives for amending the ALWTRP. The NOI also included a 30-day comment period on the scope of the EIS and the dates, times and locations of the scoping meetings (Appendix IV). As indicated above, NOAA Fisheries believes modifications to the ALWTRP are needed to meet the statutorily mandated goals of the MMPA by reducing the incidental mortality and serious injury to three strategic large whale species--the North Atlantic right whale (*Eubalaena glacialis*), humpback whale (*Megaptera novaeangliae*), and fin whale (*Balaenoptera physalus*)--incidentally taken in commercial fisheries to below the Potential Biological Removal (PBR) level for each stock.

The primary purpose of this scoping document, and the July 2003 public scoping meetings, are to communicate large whale/commercial fisheries interaction issues along the Atlantic coast and to identify the full range of options required to address the further reductions required by the MMPA. The following issues and options were developed by the ALWTRT, in conjunction with NOAA Fisheries, in order to address the incidental injury and mortality of Atlantic large whales in commercial fisheries. The list of issues and options presented below is intended to serve as a starting point for discussion of future Atlantic large whale management and should not be considered extensive. Some measures are in place under current management and may be retained. NOAA Fisheries anticipates that other issues and options will be presented to NOAA Fisheries by the public and ALWTRT members during the scoping process. NOAA Fisheries will, as appropriate, consider all issues and options as well as public comments in the plan amendment.

### **3. ATLANTIC LARGE WHALE TAKE REDUCTION PLAN OPTIONS**

Included below are the regulatory proposals provided by the ALWTRT, in conjunction with NOAA Fisheries, at the April 2003 meeting and subsequent subgroup meeting. Each set of topics includes a no action or no new management measure option (status quo). These management measures represent NOAA Fisheries' best efforts to capture the ideas and range of viewpoints expressed by the ALWTRT. It is important to note that the options under each section represent a number of management measures, and are not necessarily mutually exclusive of each other. Additionally, these options are not necessarily endorsed by NOAA Fisheries at this time. For the current ALWTRP regulations, see the ALWTRP website (<http://www.nero.nmfs.gov/whaletrp>) or call the numbers provided on the cover page to this document.

#### **I. ALWTRP GUIDING PRINCIPLES**

The ALWTRT proposed some overriding principles for reducing interactions between large whales and commercial fisheries. These include:

1. Reduce risk associated with vertical lines
2. Reduce profiles of all groundlines.

Many of the below options are intended to address risk associated with groundlines. NOAA Fisheries seeks comments on these options, as well as additional options to reduce profiles of all groundlines. Some general comments at the April ALWTRT meeting, and in subsequent subgroup meetings, included increasing the number of pots per string, requiring single buoy lines on fisheries along the Atlantic coast by a set date, and considering and/or implementing fishing effort reductions. Many ALWTRT members proposed that research efforts should immediately focus on ways to reduce risk associated with vertical lines. Therefore, NOAA Fisheries also seeks comments on ways to reduce risk associated with vertical lines.

#### **II. TRAP/POT FISHERIES**

NOAA Fisheries seeks information on other trap/pot fisheries, other than those listed below, that may warrant regulating under the ALWTRP.

##### **A. Lobster**

##### **i. Northern Inshore and Nearshore Lobster Waters**

1. No action- No new management measure (status quo)
2. Eliminate DAM and SAM programs.
3. Allow two buoy lines and one-third floating line on each end line of the buoy line in SAM areas in 2004 and beyond.

4. Eliminate DAM and SAM programs and implement sinking or neutrally buoyant line in groundline when a buy-back program for floating line is in place and a line has been developed that is durable and commercially available.

5. Eliminate DAM and SAM programs, and adopt the below specified regulations for “high risk” areas (not yet defined) by 2006 including:

i) Year-round requirements;

ii) Current weak link requirements;

iii) Require non-floating groundline to include sinking, neutrally buoyant or “low profile” (not yet defined) line;

iv) Allow two buoy lines; and

v) Allow one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line;

and commit to reducing groundline profile in other areas (e.g. rocky bottom areas such as waters east of Booth Bay, except for Mt. Desert Rock) (not yet defined) by 2008.

6. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.

7. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.

8. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines, and one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line in SAM areas.

9. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines and one-third floating line on the bottom third of each buoy line in SAM areas.

10. Maintain DAM program and request voluntary removal of gear until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
11. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.
12. Allow 1,100 pound weak links on buoys in Grand Manan Channel due to extreme tides in the area.
13. Allow a 1,100 pound weak link at the junction and 600 pound weak link at the surface buoys in Northern Inshore and Northern Nearshore Lobster Waters.
14. Prohibit coils of rope (i.e. shanks; wraps of excess buoy line just below the buoy which act as storage) on the buoy line.
15. Phase-in a percentage of non-floating groundline annually in “high risk” areas (not yet defined) by a certain time period (e.g. *25% use of nonfloating groundlines annually, 100% in four years*).
16. Maintain ALWTRP universal requirement that requires buoy lines to be as knotless as possible.
17. Consider effort reductions occurring through Fishery Management Plans (FMPs), either by building in reductions or considering present reduction plans.
18. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

## **ii. Offshore Lobster Waters**

1. No action- No new management measure (status quo).
2. Eliminate DAM and SAM programs.
3. Eliminate DAM and SAM programs and implement sinking or neutrally buoyant line in groundline when a buy-back program for floating line is in place and a line has been developed that is durable and commercially available.
4. Until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines:
  - i) Maintain DAM program and request voluntary removal of gear; or
  - ii) Require fishermen to remove one end line for the 15-day restricted period; and
  - iii) Keep SAM program and allow two buoy lines and one-third floating line on the bottom of each end line.
5. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
6. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
7. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line in SAM areas.
8. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line in SAM areas.

9. Eliminate DAM and SAM programs by 2009 (2007 if substantial financial assistance for industry to convert line) and require neutrally buoyant, sinking or “low profile” (not yet defined) line in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
10. Eliminate DAM and SAM programs by 2008 and require neutrally buoyant, sinking or “low profile” (not yet defined) line in groundlines as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
11. Phase-in a percentage of non-floating groundline annually in “high risk” areas (not yet defined) by a certain time period (e.g. *25% use of non-floating groundlines annually, 100% in four years*).
12. Consider the Lobster Management Area 3 management plan which includes an approximately 20% active trap reduction with additional active and passive reductions awaiting action by state/federal authorities (target is 50%).
13. Maintain current weak link breaking strength requirements at buoys.
14. Prohibit coils, toggles (if allowed to fish one-third floating line on the bottom third of each end line) and knots on buoy lines.
15. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.
16. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

### **iii. Southern Nearshore Lobster Waters**

1. No action- No new management measure (status quo).
2. Eliminate DAM program.
3. Maintain DAM program and request voluntary removal of gear until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
4. Eliminate DAM program by 2008 and require one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
5. Eliminate DAM program by 2008 (earlier with funding to convert line) and require neutrally buoyant, sinking or “low profile” (not yet defined) line in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
6. Eliminate DAM program by 2006 and require neutrally buoyant, sinking or “low profile” (not yet defined) line in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
7. Consider effort reductions occurring through FMPs, Take Reduction Plans, and turtle regulations.
8. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.
9. Prohibit coils of rope (i.e. shanks; wraps of excess buoy line just below the buoy which act as storage) on the buoy line.
10. Maintain ALWTRP universal requirement that requires buoy lines to be as knotless as possible.
11. Allow weights to be used on the buoy line instead of requiring sinking or neutrally buoyant line.
12. Implement requirements similar to the Southern Nearshore Lobster Waters in the portion of Lobster Management Area 6 that is not included in the ALWTRP exempted waters (i.e. mouth of Long Island Sound) and is presently not regulated.
13. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

## **B. Black sea bass, scup, conch/whelk and shrimp trap/pot**

1. No action- No new management measure (status quo).
2. Fold fisheries under the ALWTRP regulations, including compliance with the ALWTRP “universal” gear modifications
3. Use the same area designations and requirements (e.g. weak links) as are currently required and being proposed for the corresponding ALWTRP lobster management areas. For proposed options, see the appropriate ALWTRP lobster management area(s) above.
4. For the black sea bass fishery which operates south of the current ALWTRP lobster management areas:
  - i) Exempt this portion of black sea bass trap/pot fishery from the ALWTRP regulations;
  - ii) Require modifications similar to the current Southern Nearshore Lobster Waters. In addition, require modifications currently being proposed for the Southern Nearshore Lobster Waters such as sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line;
  - iii) Require modifications similar to the current Southern Nearshore Lobster Waters, including a requirement for one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line. Do not require sinking, neutrally buoyant line or “low profile” (not yet defined) line due to potential impacts to live bottom;
  - iv) Don’t require weak links on buoy line;
  - v) Prohibit coils of rope (i.e. shanks; wraps of excess buoy line just below the buoy which act as storage) on the buoy line.
5. Allow two buoy lines with one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
6. Consider effort reductions occurring through FMPs, either by building in reductions or considering present reduction plans.
7. Implement exempted areas similar to current and proposed areas for the appropriate ALWTRP lobster management area(s). (See proposals in “Exempted Areas” section).

### **C. Red crab trap/pot**

1. No action- No new management measure (status quo).
2. Fold fishery under the ALWTRP regulations, including compliance with the ALWTRP “universal” gear modifications.
3. Maintain the fishery as a separate fishery from lobster trap/pot in the ALWTRP regulations and do not use the lobster management areas to define the fishery.
4. Maintain 3,780 pound buoy line weak link requirement as currently required in the Final Rule implementing the Red crab FMP. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.
5. Allow two buoy lines with one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
6. Prohibit coils, toggles (if allowed to fish one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line) and knots on buoy lines.
7. Consider “deep water” exemptions (greater than 250-300 fa) for sinking, neutrally buoyant or “low profile” (not yet defined) groundline (see “Exempted areas” section).

### **D. Hagfish trap/pot**

1. No action- No new management measure (status quo).
2. Fold fishery under the ALWTRP regulations, including compliance with the ALWTRP “universal” gear modifications.
3. Use the same area designations and requirements (e.g. weak links) for the corresponding ALWTRP lobster management areas.
4. Consider the same requirements as being proposed for the corresponding ALWTRP lobster management areas. For proposed options, see the appropriate ALWTRP lobster management area(s) above.
5. Allow two buoy lines with one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.

### **E. Jonah crab trap/pot**

1. No action- No new management measure (status quo).
2. Fold fishery under the ALWTRP regulations, including compliance with the ALWTRP “universal” gear modifications.
3. Use the same area designations and requirements (e.g. weak links) for the corresponding ALWTRP lobster management areas.
4. Consider the same requirements as being proposed for the corresponding ALWTRP lobster management areas. For proposed options, see the appropriate ALWTRP lobster management area(s) above.

### **III. GILLNET**

#### **A. Northeast**

##### **I. Anchored Gillnet**

1. No action- No new management measure (status quo).
2. Consider effort reductions occurring through FMPs, either by building in reductions or considering present reduction plans.
3. Eliminate DAM and SAM programs.
4. Maintain DAM and SAM programs.
5. Until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines,
  - i) Maintain DAM program and request voluntary removal of gear;
  - ii) Keep SAM program and allow two buoy lines and one-third floating line on the bottom of each end line.
6. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
7. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines.
8. Eliminate DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines and one-third floating line on the bottom third of each buoy line.
9. Maintain DAM program and consider an immediate temporal and/or spatial expansion of SAM area requirements until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines. Allow two buoy lines and one-third floating line on the bottom third of each buoy line.

10. Eliminate DAM and SAM programs by 2008 and require neutrally buoyant line, sinking line or “low profile” (not yet defined) line in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line. Expand SAM net panel weak link modifications to “high risk” areas (not yet defined).

11. Eliminate DAM and SAM programs by 2006 and require neutrally buoyant line, sinking line or “low profile” line (not yet defined) in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line.

12. Eliminate DAM and SAM programs by 2006 and require neutrally buoyant line, sinking line or “low profile” line (not yet defined) in groundlines, SAM net panel weak link modifications, as well as one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line.

13. Eliminate DAM and SAM programs sooner than 2006 and require neutrally buoyant line, sinking line or “low profile” line (not yet defined) in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line.

14. Maintain DAM program, including a modification to allow its implementation in critical habitat areas during restricted time periods and notify fishermen within 24 hours of the DAM trigger being met, in addition to the following options:

i) Mandatory removal of gear;

ii) Effective date is five days after publication of the rule or other appropriate time period which factors in the weather and distance a vessel is from shore; and/or

iii) Require SAM gear modification in a DAM zone.

15. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.

16. Prohibit coils of rope (i.e. shanks; wraps of excess buoy line just below the buoy which act as storage) on the buoy line.

17. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

## **B. Mid-Atlantic**

### **I. Anchored Gillnet**

1. No action- No new management measure (status quo).
2. Eliminate DAM program.
3. Maintain DAM program and request voluntary removal of gear until there are broad-based gear modifications such as implementation of sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines, and one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line.
4. Eliminate DAM program by 2006 and require, year-round, neutrally buoyant line, sinking or “low profile” (not yet defined) line in groundlines, and one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line.
5. Eliminate DAM program by 2008 (earlier with funding to convert line) and require, year-round, neutrally buoyant line, sinking or “low profile” (not yet defined) line in groundlines, and one-third floating line on the bottom third and sinking or neutrally buoyant on the top two-third of each buoy line. Exclude those gillnets which are weighted to the bottom of the ocean floor but do not have an anchor attached on either end by: 1) revising the anchored gillnet definition, or 2) creating a new definition which will define these gillnets. For this gillnet type, expand current anchored gillnet requirements from December 1 to March 31 to an expanded time period, on one or both ends, when whales are known to occur in the area (but not year-round) or consider number 7 below.
6. Eliminate DAM program by 2006 and require, year-round, neutrally buoyant, sinking or “low profile” (not yet defined) line in groundlines, as well as one-third floating line on the bottom third and sinking or neutrally buoyant line on the top two-third of each buoy line. Exclude those gillnets which are weighted to the bottom of the ocean floor but do not have an anchor attached on either end by: 1) revising the anchored gillnet definition, or 2) creating a new definition which will define these gillnets. For this gillnet type, expand current anchored gillnet requirements from December 1 to March 31 to an expanded time period, on one or both ends, when whales are known to occur in the area (but not year-round) or consider number 7 below.
7. Define those gillnets which are weighted to the bottom of the ocean floor but do not have an anchor attached on either end by: 1) revising the anchored gillnet definition, or 2) creating a new definition which will define these gillnets. For this gillnet type, don’t regulate as an anchored gillnet fishery and consider the following options:

i) Implement requirements similar to the mid-Atlantic driftnet fishery (e.g. no fishing with driftnet gear at night unless that gear is tended; all driftnet gear set by a vessel must be removed from the water and stowed on board the vessel before returning to port);

ii) Prohibit fishing these types of nets at night;

iii) Expand requirements from December 1 to March 31 to a time period, on one or both ends, when whales are known to occur in the area (but not year-round).

8. Consider effort reductions occurring through FMPs, Take Reduction Plans, and turtle regulations.

9. Require weak links on all flotation devices and/or weighted devices such as toggles and/or leaded lines.

10. Prohibit coils of rope (i.e. shanks; wraps of excess buoy line just below the buoy which act as storage) on the buoy line.

11. Maintain ALWTRP universal requirement that requires buoy lines to be as knotless as possible.

12. Allow weights to be used on the buoy line instead of requiring sinking or neutrally buoyant line.

13. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

## **ii. Drift Gillnet**

1. No action- No new management measure (status quo).

2. Expand requirements from December 1 to March 31 to an expanded time period when whales are known to occur in the area (but not year-round).

3. Consider expanding exempted areas (see proposals in “Exempted Areas” section).

## **C. Southeast**

### **I. Shark gillnet**

1. No action- No new management measure (status quo).
2. For the period November 15 through November 31, modify definition of “Night” to mean one hour after sunset and one hour prior to sunrise.
3. Exempt 5" or greater stretch mesh gillnet from straight set restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.
4. Exempt 5" or greater stretch mesh gillnet from the current night definition restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.
5. Exemption of all ALWTRP-related restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.
6. Consider using Vessel Monitoring Systems (VMS) in lieu of observer coverage. Consider the following options:
  - i) Require VMS during the North Atlantic right whale calving season (November 15- March 31) in lieu of 100 percent observer coverage; or
  - ii) Require VMS year-round in lieu of 100 percent observer coverage.

## **ii. Coastal gillnet**

1. No action- No new management measure (status quo).
2. Implement gear modifications similar to Mid-Atlantic anchored gillnet gear.
3. For the period November 15 through November 31, modify definition of “Night” to mean one hour after sunset and one hour prior to sunrise.
4. Exempt gillnets less than 5" stretch mesh from straight set restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.
5. Exempt gillnets less than 5" stretch mesh from the current night definition restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.
6. Exemption of all ALWTRP-related restrictions from November 15 through November 31 for the area 29° North latitude to the southern end of the Restricted area.

#### **IV. ALWTRP Critical Habitat Areas**

1. No action- No new management measure (status quo).
2. Maintain restrictions in ALWTRP Critical Habitat areas until risk associated with vertical lines and groundlines are reduced.
3. Restrict gillnet fishing in the ALWTRP Great South Channel Sliver Area during the restricted time period (April 1 through June 30) through a closure.
3. Restrict gillnet fishing in the ALWTRP Great South Channel Sliver Area during the restricted time period (April 1 through June 30) through a gear modification (e.g. SAM gear modifications or SAM net panel modification only)
4. Modify the ALWTRP Cape Cod Bay Critical Habitat restricted area from January 1 to May 15 to January 1 to April 30 to be consistent with the time period used by the Commonwealth of Massachusetts.
5. Reanalyze recent right whale sightings data to determine whether the ALWTRP Critical Habitat Areas should be reconfigured.
6. Revisit restrictions in ALWTRP Critical Habitat Areas after number 5 above is completed.

## **V. Exempted Areas**

1. No action- No new management measure (status quo).
2. Exempt areas landward of the 72 COLREGS demarcation line (International Regulations for Preventing Collisions at Sea, 1972, as depicted or noted on nautical charts published by the National Oceanic and Atmospheric Administration (Coast Charts 1:80,000 scale), and as described in 33 CFR part 80), bridges, and headland to headland areas including sheltered harbors, inland waters.
3. Adopt the 72 COLREGS demarcation line (International Regulations for Preventing Collisions at Sea, 1972, as depicted or noted on nautical charts published by the National Oceanic and Atmospheric Administration (Coast Charts 1:80,000 scale), and as described in 33 CFR part 80) as the exemption line for Delaware Bay
4. Exempt the sinking, neutrally buoyant or “low profile” (not yet defined) line in groundline requirement off of the shelf edge, rocky areas (e.g. Canyon, rocky areas off Georges Bank, 17-fathom rocks off NJ), and near wrecks.
5. Exempt sinking, neutrally buoyant or “low profile” (not yet defined) line in groundlines requirements in deep water areas greater than 250-300 fathoms.
6. Exempt the portion of Lobster Management Area 6 that is not included in the exempted waters (i.e. Long Island Sound) and is presently not regulated.
7. Exempt areas proposed by the Maine Department of Marine Resources (See Appendix II).
8. Exempt areas proposed by the offshore lobster industry (See Appendix II).
9. Allow exemptions but provide for the capability to use the DAM program to deal with large whale sightings within these areas.

## VI. Gear Marking

1. No action- No new management measure (status quo).
2. Eliminate current federal gear marking requirement
3. Status quo (no change) until additional research and work is conducted on this issue.
  - i) Investigate the development of a bar code or implanted smart tag that can be imbedded in the line/surface buoy system. This smart tag may be similar to the RFID (radio frequency identification) tags used in the West Coast crab fishery. The code/tag should be able to be fixed to the line/buoy system by the manufacturer during production or the fishermen after the line /gear has been purchased. The code /tag can identify the fishermen who can then be interviewed for detailed information or the code/tag can carry specific gear/fishery/area information.
4. Consider different gear marking requirements/strategies than are currently required throughout the ALWTRP management areas such as:
  - i) The gear marking system should mark the buoy lines and surface buoys to identify the fishery and the area fished, this will help identify where there is the greatest risk;
  - ii) It is most important to know what part of the gear is involved in entangling the whale and less important to know the geographical area. A specific color should be used to identify sinking/neutrally buoyant ground line to determine whether line-entangling whales are compliant non-floating ground line or buoy line;
  - iii) Implemented over time and coordinated with rope manufacturers, ground lines and buoy lines should have specific identifying colors. This would allow a quick visual cue as to what part of the gear an animal is entangled;
  - iv) All manufactured neutrally buoyant line should be marked to identify it as such to determine if this line is indeed successful in reducing the number of entanglements;
  - v) Neutrally buoyant line should be marked as such to allow identification for enforcement efforts;
  - vi) Expand on the marking techniques currently required of the ALWTRP. The requirement to mark a buoy line with a four inch mark of specific color to identify the line as buoy line used in a specific fishery should be expanded into state waters and to all fixed gear fisheries. The current requirement of one four inch

mark mid-way along the length of a buoy line should be expanded by requiring that same mark be placed at greater intervals such as every 10 fathom;

vii) Develop stainless steel or nylon type band that can be crimped around a line and coded with fishermen identification or fishery/gear/area information for all fixed gear fisheries and waters along eastern seaboard;

viii) Require that all surface buoy systems in federal and state waters are marked in a manner that identifies the owner/vessel such as vessel name and/or license/permit number and/or fishery;

ix) Require all fixed gear (pots/traps/gillnets) be identified with a tag in both state and federal waters;

x) Ensure any gear marking scheme is reasonable, cost-effective; and/or

xi) Investigate gear marking currently in place for various FMPs and TRPs.

## **VII. ALWTRP Regulatory Language Changes:**

1. No action- No new management measure (status quo).
2. Make heading in the ALWTRP regulations consistent. (E.g. “Weak Links on all Buoy Lines,” “Buoy Weak Links” and “Weak Links should be changed to “Buoy Line Weak Links” where appropriate).
3. Ensure that any mention of buoy line weak links includes the following guidance:
  - i) Weak links must be designed such that the bitter end of the buoy line is clean and free of any knots when the link breaks;
  - ii) Splices are not considered to be knots for the purposes of this provision; and
  - iii) Each weak link must be installed as close to each individual buoy as operationally feasible.
4. Change mention of “rope of appropriate diameter” to “rope of appropriate breaking strength” in the regulations when referring to the techniques for meeting the weak link requirements. (Note: It has been established that the diameter of rope should not be used as a mitigation measure).
5. Include reference in the regulations to the “Technique for Making Weak Links and Marking Buoy Lines” brochure and how to obtain a copy to clarify what the NOAA Fisheries approved techniques are.
6. In the regulatory language, where sinking and/or neutrally buoyant line is required for groundlines, prohibit the attachment of buoys, toggles or other flotation devices.
7. Modify the definition of sinking and neutrally buoyant line and consider the following options:
  - i) Combine these terms into one called “non-floating” line;
  - ii) Keep two separate names and terms;
  - iii) Modify the definitions to allow sinking line which contains some portion of polypropylene blended with other fibers during the manufacturing process, as long as the final product would not float; and/or
  - iv) Establish a procedure for determining specific gravity of rope, as well as a criteria for establishing a density standard based on known or measure water

densities along the Atlantic coast (see Appendix III). Modify the sinking and neutrally buoyant line definitions at 50 CFR 229.2 accordingly.

8. Add a new definition for “low profile” line, pending ability to define such a line (e.g. 2 feet off the bottom of a test tank)
9. In Northeast Gillnet Waters and the Mid-Atlantic Coastal Gillnet Waters section of the regulations, clarify that weak links should be placed in the center of net panels up to and including 50 fathoms, or every 25-fathoms for longer panels.
10. Clarify in the regulations for Northeast Gillnet Waters and SAM gear modifications that a net panel is up to and including 50 fathoms in order to specify the location of the floatline weak links.
11. Regulate the “Northeast driftnet” fishery (e.g. bait net fishery; nets at ocean surface and not anchored to the ocean floor on either end) similar to the “Mid-Atlantic drift gillnet” fishery.
12. Regulate the “Northeast anchored float gillnet” fishery (net at ocean surfaced and anchored to the bottom of the ocean floor on one or both ends) similar to the currently regulated “Northeast sink gillnet” fishery.
13. Change the Cape Cod Bay groundline requirements so fishermen may use “sinking and/or neutrally buoyant line” in their groundlines during the restricted time period. Presently, from January 1 through May 15 in Cape Cod Bay Critical Habitat Area, the regulations allow for only “sinking line.”
14. Where not already specified, clarify in the regulatory language that fishermen may use “neutrally buoyant and/or sinking line.”
15. Define sunset and sunrise to be the following: "Official sunrise or official sunset means the time of sunrise or sunset as determined for the date and location in The Nautical Almanac, prepared by the U.S. Naval Observatory."

#### **4. LIST OF REFERENCES**

NMFS. 2003. Environmental Assessment of the Proposed Rule amending the Atlantic Large Whale Take Reduction Plan Dynamic Area Management Gear Modifications. NMFS. Northeast Region. March 4, 2003.

Whittingham, A., D. Hartley, J. Kenney, T. Cole, and L. Pomfret. Large Whale Entanglement Report 2002 (Draft). NMFS. Northeast Region. February 2003.

**Appendix I**  
**Marine Mammal Protection Act Definitions used by the**  
**Atlantic Large Whale Take Reduction Plan Regulations**

50 CFR 229.32

1. *Anchored gillnet* means any gillnet gear, including a sink gillnet or stab net, that is set anywhere in the water column and which is anchored, secured or weighted to the bottom of the sea. Also called a set gillnet.
2. *Driftnet, drift gillnet, or drift entanglement gear* means a gillnet or gillnets that is/are unattached to the ocean bottom and not anchored, secured or weighted to the bottom, regardless of whether attached to a vessel.
3. *Sink gillnet* or *stab net* means any gillnet, anchored or otherwise, that is designed to be, or is fished on or near the bottom in the lower third of the water column.
4. *Shark gillnetting* means to fish a gillnet in waters south of the South Carolina/Georgia border with webbing of 5 inches or greater stretched mesh.
5. *Strikenet* or *to fish with strikenet gear* means a gillnet that is designed so that, when it is deployed, it encircles or encloses an area of water either with the net or by utilizing the shoreline to complete encirclement, or to fish with such a net and method.
6. *To strikenet for sharks* means to fish with strikenet gear in waters south of the South Carolina/Georgia border with webbing of 5 inches or greater stretched mesh.
7. *Neutrally buoyant line* means line with a specific gravity near that of sea water, so that the line neither sinks to the ocean floor nor floats at the surface, but remains close to the bottom.
8. *Sinking line* means rope that sinks and does not float at any point in the water column. Polypropylene rope is not sinking line unless it contains a lead core.

## **Appendix II**

### **Proposed Exempted Areas**

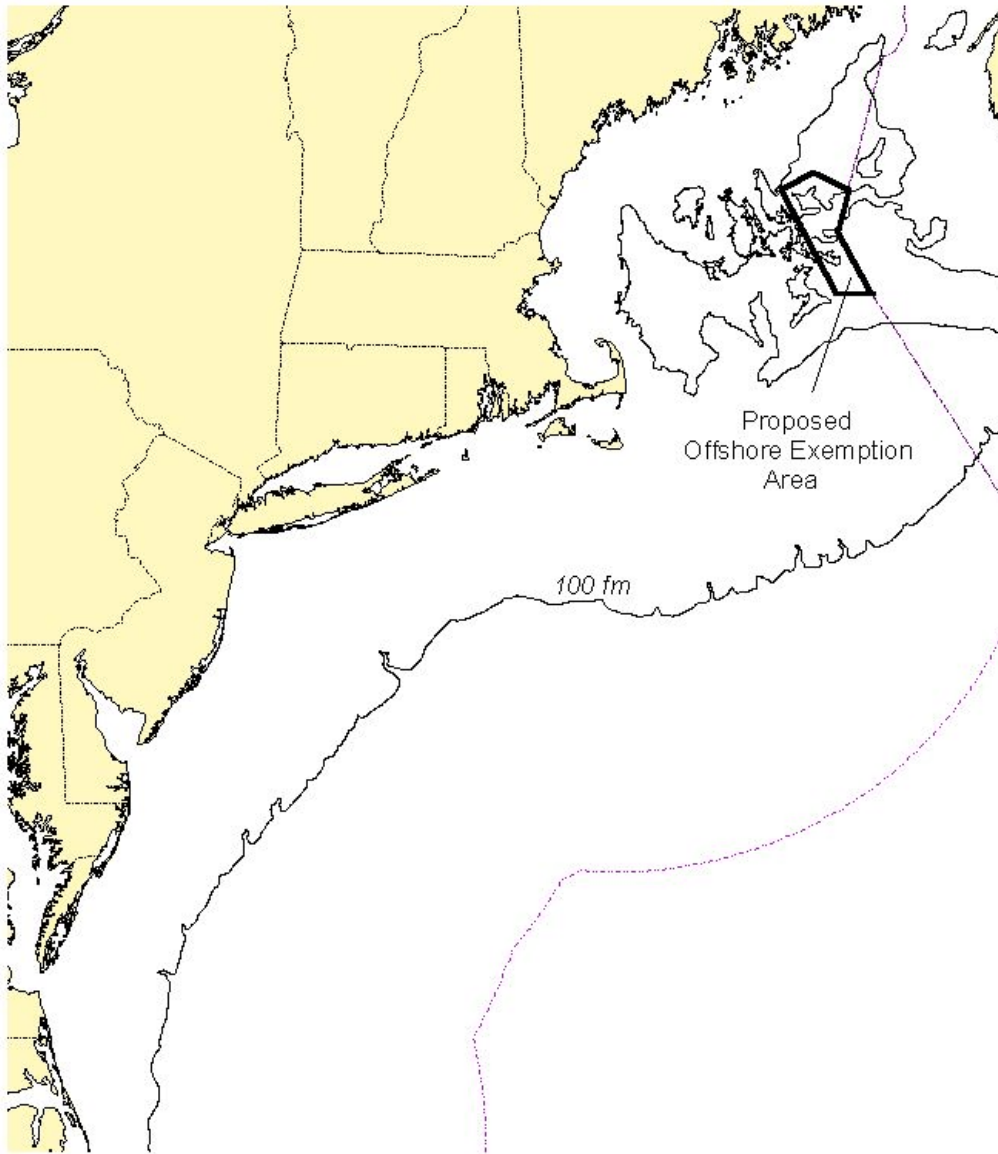
#### **1. Offshore Lobster:**

I. The Offshore lobster industry proposed to exempt low-profile groundline regulations in deep water extending from the 100-fathom curve, (along the Continental shelf and into the canyons), as well as the area encompassing the following points:

43/12 N	67/38 W
43/20 N	68/W
43/12N	68/20 W
42/25 N	67/45 W
42/25 N	67/23 W

The above coordinates denote a single area which encompasses excessively rocky bottom (see graphic below).

## *Proposed Offshore Exemption Area*

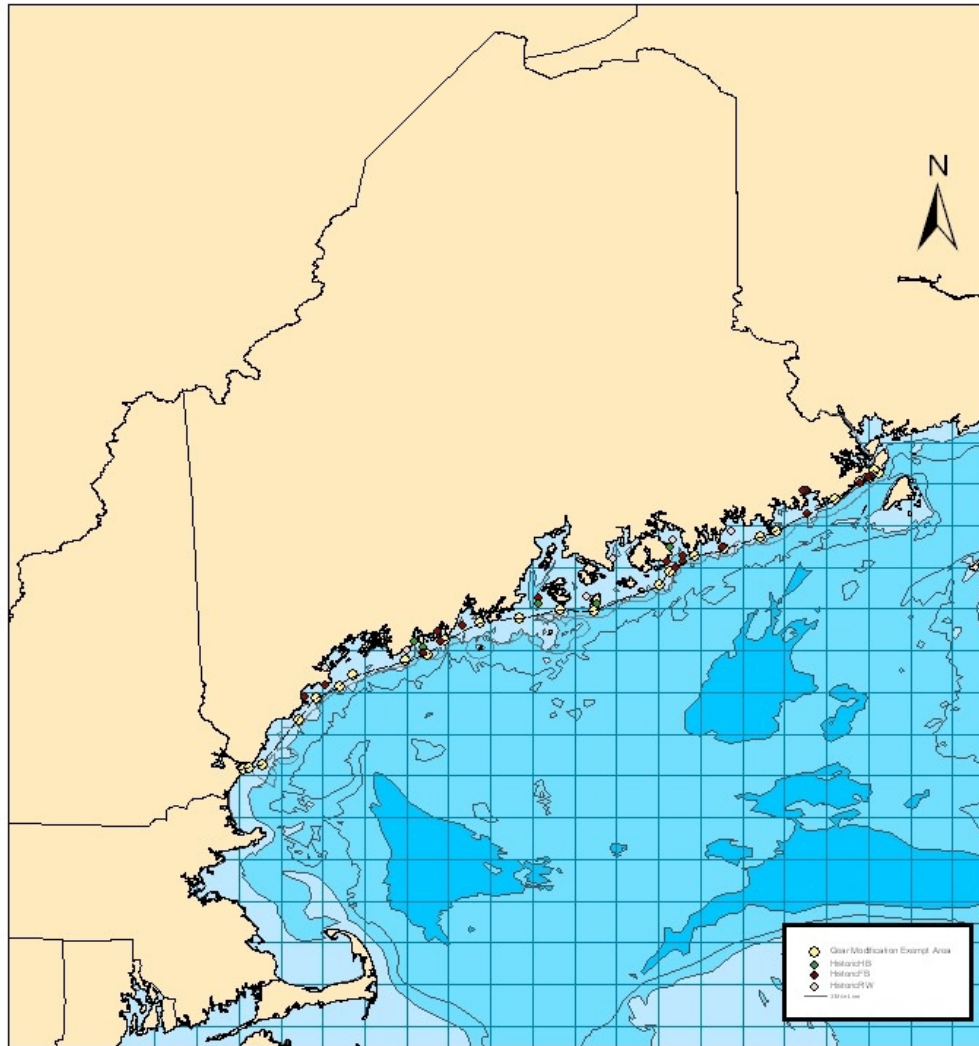


## 2. Maine Inshore Areas:

I. The Maine Department of Marine Resources (MEDMR) proposed to exempt areas landward of a line which connects the below points (see graphic below). This is based on the MEDMR's analysis of the best available sightings data which indicates a total count of 8 right whales, 21 humpbacks and 31 finbacks sighted westward of these points between 1969 and 2002:

1. Odiornes Pt. Portsmouth NH:	43.02.55/70.42.73
2. 2KR Whistle – Kittery Point:	43.02.93/70.41.47
3. 2MR – Murray Rock:	43.04.06/70.36.70
4. RW CP – Cape Porpoise:	43.20.23/70.23.64
5. RW WI – Wood Island:	43.27.63/70.17.48
6. C 1 – East Hue and Cry:	43.31.94/70.08.68
7. N BS – Bulwark Shoal:	43.36.04/70.03.98
8. R20 ML- Mile Ledge:	43.41.44/70.45.28
9. R 2BR – Bantam Ledge:	43.43.64/69.37.58
10. C PL 47 – Pemaquid Ledge:	43.48.96/69.31.15
11. R22 OM – Old Man Ledge:	43.15.18/69.18.89
12. RG 1B – Two Bush Channel:	43.56.72/69.04.89
13. R 2A – South Vinalhaven I:	43.59.83/68.50.06
14. R2 – Roaring Bull Ledge, Isle Au haut:	43.59.36/68.37.95
15. Southern point Great Duck I:	44.08.36/68.14.75
16. R 8BI – Baker I:	44.13.55/68.10.71
17. R 2S – Schoodic Point:	44.19.08/68.02.05
18. N 2 – Petit Manan:	44.21.66/67.51.78
19. R 2SR – Seahorse Rock, west Great Waas I:	44.25.74/67.38.39
20. Freeman Rock, east Great Waas I:	44.27.69/67.32.86
21. R2LR, Cutler:	44.37.69/67.01.61
22. R2BE, Bailys Mistake:	44.46.13/67.01.61
23. N2, Morton Ledge:	44.47.35/66.59.28
24. G1, West Quoddy:	44.47.96/66.56.51
25. 2Q, Quoddy Narrows:	44.49.47/66.56.62

## Proposed Maine Whale Gear Modification Exempt Areas All State waters westward of the following points



Summary of whale sightings within proposed Gear Modification Exempt Area  
1969- Spring 2002

Northern Right: 8  
Humpback: 21  
Finback: 31

**Appendix III**  
**Criteria for Establishing a Density Standard for Neutrally Buoyant Rope**  
**And Procedure for Determining the Specific Gravity of Rope**

**1. Criteria for Establishing a Density Standard for Neutrally Buoyant Rope**

Data selected from 140 stations, from eight different surveys in 2000 & 2001 are summarized in the table below. Coverage was concentrated in the areas of Southern New England, Georges Bank and the Gulf of Maine with less coverage extending south to Cape Hatteras, NC. Additional analysis of data south of Cape Hatteras is being conducted and may influence the final *sigma - t* value.

Bottom Sea Water Characteristics

	Depth (fathoms)	Bottom Temp. (Deg. C.)	Sigma - <i>t</i>
Minimum	12	2.25	22.90
Median	55	7.85	26.13
Maximum	236	18.10	27.56
Average	68	8.63	26.01

Based on this data, establishing the criteria for rope based on a *Sigma - t* value of 30.00 would insure that rope would not float under the conditions shown above. Rope manufactured with a density of 1.030 or greater (at 60 degrees F.) would be negatively buoyant (sinking) under these conditions.

References

Myers, J. J., C. H. Holm, and R. F. McAllister: Handbook of Ocean and Underwater Engineering. McGraw-Hill, NY., 1969.  
Neumann, G., and W. J. Pierson, Jr.: Principles of Physical Oceanography. Prentice-Hall, Englewood Cliffs, NJ., 1966.

Data has been obtained from the Fisheries and Ecosystems Monitoring and Analysis Division, Northeast Fisheries Science Center, NMFS, Woods Hole, MA., from the following surveys:

Sea Scallop Survey, July - August, 2000  
Bottom Trawl Survey, September - October, 2000  
Bottom Trawl Survey, March - May, 2000  
Bottom Trawl Survey, February - March, 2000  
Bottom Trawl Survey, February - April, 2001  
Bottom Trawl Survey, September - October, 2001  
ECMON Survey, August, 2000  
ECMON Survey, June, 2001

## 2. Procedure for Determining the Specific Gravity of Rope

The following procedure was developed for determining the specific gravity of rope samples. It is based on Archimedes' Principal, or the Law of Hydrostatics, which says that any body partially or completely submerged in fluid is acted on by an upward force that is equal to the weight of the fluid displaced by the object in the liquid. The specific gravity of a solid is the ratio of the mass of the body to the mass of an equal volume of water at a standard temperature, in this case 60°F.

Specific gravity can be calculated using the equation:

$$Sg = \frac{A}{A - B}$$

where:

$Sg$  = specific gravity

$A$  = dry sample weight

$B$  = submerged sample weight

Obtain a sample with a length of approximately 18 inches by cutting cold with a knife. A minimum sample weight of 30 grams (dry weight) is recommended. Steel wire of known weight and density is used to bind the ends of the sample to keep them from fraying as necessary. It is also used to hold the sample in a coil shape and provide weight to assure the sample will be fully submerged when placed in water. The dry weight and submerged weight of the wire must be known in order to allow their affect to be removed from the calculation of specific gravity of the rope sample.

Submerge sample in water of known specific gravity ( $Sg$  of water is measured with a hydrometer to 4<sup>th</sup> decimal place). Water is maintained at 65°F ( $\pm 5^\circ\text{F}$ ) and the final specific gravity calculation corrected to 60°F. Submerged sample is agitated and weighed on a daily basis for 7 days.

The submerged sample weight from the seventh day is used for the final calculation. The dry sample weight is then obtained after the sample is removed from the water and held at 135°F for a 36 hour period.

Note that weights  $A$  &  $B$  must be corrected to exclude any material attached to the sample as described above for the purpose of binding, sinking, etc. Care must be exercised to insure that no outside influences adversely affect these weight measurements. Finally, corrections for temperature and  $Sg$  of the water used in the above procedure need to be performed.

Weights are measured using an Adventurer balance, model AV-150 manufactured by Ohaus Corp., Pine Brook, NJ, with the following specifications: capacity - 150g, readability - 0.001g, repeatability - 0.001g, linearity -  $\pm 0.002\text{g}$ , sensitivity drift - 10ppm/°C. The balance is allowed to warm up for at least 60 minutes prior to weighing any samples and standard calibration masses are weighed and recorded on a daily basis during testing to account for any variability in the measurements.

**Appendix IV**  
**Schedule of Public Scoping Meetings**

The dates, times, and locations of the meetings are scheduled as follows:

1. Monday, July 7, 2003- Fairhaven, MA, 6-9 p.m.  
Holiday Inn  
110 Middle Street  
Fairhaven, MA 02719
2. Wednesday, July 9, 2003- Cape May Court House, NJ, 6-9 p.m.  
Rutgers Cooperative Extension of Cape May County  
355 Court House/South Dennis Road (Route 657)  
Cape May Court House, NJ
3. Thursday, July 10, 2003- Washington, NC, 6-9 p.m.  
North Carolina Division of Marine Fisheries  
Pamlico District Office  
943 Washington Square Mall  
Washington, NC 27889
4. Monday, July 14, 2003- Portland, ME, 6-9 p.m.  
Holiday Inn - Portland by the Bay  
88 Spring Street  
Portland, ME 04101
5. Tuesday, July 15, 2003, Ellsworth, ME, 6-9 p.m.  
Holiday Inn  
215 High Street  
Ellsworth, ME 04505
6. Thursday, July 17, 2003, Ft. Pierce, FL, 6-9 p.m.  
Holiday Inn  
Okeechobee Road  
Ft. Pierce, FL 34950